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Observations on the Denning Habits of the Prairie Rattlesnake, *Crotalus viridis viridis* (Rafinesque)

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While hunting rattlesnakes to be used for venom extraction in serum production, on October 18, 1942, August Napper and I had the unique experience of watching prairie rattlesnakes assemble at their hibernating quarters. It is well known that this is a gregarious species, very common in parts of the range. Opportunities for similar observations would be few with a less gregarious or less common kind and these were made possible by a fortuitous set of circumstances.

Earlier weather had been sufficiently cool to cause the rattlesnakes to start toward their den; in fact, in view of earlier temperatures I think it would be safe to assume that most of the population under discussion had reached the den and that warm weather preceding our visit had caused some of the snakes to wander a short distance away.

Our hunt began about 12:30 P. M. about 18 miles northwest of Winner, Tripp County, South Dakota. Most of this country is comparatively level prairie grassland with occasional ranges of glacial hills. We had discovered only a few juvenile hog-nosed snakes (*Heterodon nasicus nasicus*) when we located a rattlesnake den at approximately 1:30 P. M. Near the summit of a hill we saw about 35 rattlesnakes sunning themselves in a hole about three feet in diameter at the outer rim and tapering to an opening scarcely six inches in diameter at a depth of two feet. The depth to which the smaller opening penetrated is unknown because of an abrupt turn. The hole had probably been made originally by badgers which are common in the area.

In anticipation of finding large numbers, we had prepared simple but effective equipment to catch them rapidly. Using rods similar in size and shape to an ordinary stove poker, we raked the snakes out and tossed them ten or fifteen feet down the steep hillside. While one of us stayed at the

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entrance of the den and prevented them from entering, the other dropped them in a large metal can by means of the bent rod. This enabled us to work more rapidly than the conventional method of pinning the snakes down singly with a rod, grasping each one behind the head and dropping it in a canvas sack.

In less than half an hour we had captured all those that had been at the entrance of the den. We had scarcely finished catching these when other rattlesnakes began coming in rapidly in considerable numbers. This was evidently occasioned by a sudden and extremely stiff wind that caused a drop in temperature from 79° F. at 1:00 P. M. to 46° F. at 2:00 P. M. The snakes converged on the den by following exactly one or another of three routes. For the next half hour from one to six rattlesnakes were in sight at once, and none deviated from the selected routes. When the snakes became aware of our presence at the mouth of the den, usually when they were about ten feet distant, they began to rattle and strike as they continued to approach. This aggressive attitude is definitely contrary to their usual behavior of striking only when endangered or when no avenue of escape is open. The influx stopped as suddenly as it began, indicating that none of these snakes had been a great distance from the den. The total catch was 66 rattlesnakes in less than an hour.

With the sunning aggregation were six bull snakes (*Pituophis sayi sayi*), four blue racers (*Coluber constrictor flaviventris*), two western hog-nosed snakes (*Heterodon nasicus nasicus*), and one banded king snake (*Lampropeltis triangulum sypila**).

On a subsequent trip to South Dakota (1945) A. M. Jackley of Pierre, who has undoubtedly spent more time observing prairie rattlesnakes in the field than any other person, told me that he had, on several occasions, observed these rattlesnakes in behavior similar to that here described.

*In spite of the fact that the locality is closer to the known range of the subspecies *gentilis*, this individual so closely resembled typical *sypila* that the use of this name seems desirable.